WHAT IS CLAIMED IS:

1. A method of making a halogen lamp, with a predetermined interior glass surface quality and purity, by hot forming, said method comprising the steps of:

(a) producing a melt of molten glass;

(b) passing molten glass along a tool to form a body of glass for a halogen lamp from said melt of molten glass;

(c) regulating a stream of gas to provide a sufficient stream of gas having a sufficient oxygen content in the interior of said body of glass for a halogen lamp to minimize sodium ions and/or alkali oxides in said body of glass and to minimize reaction of lamp halogen with the interior of a halogen lamp and thus to produce a glass surface of predetermined quality and predetermined purity in the interior of said body of glass for a halogen lamp;

(d) inserting a filament in said body of glass to produce a halogen lamp; and

(e) injecting lamp halogen into said body of glass to produce a halogen lamp.

2. The method of Claim 1 comprising at least one of:

(a2) setting and regulating the oxygen content of said stream of gas to a value selected in the range of from 0 volume percent to 100 volume percent;

(b2) setting and regulating the oxygen content of said stream of gas to a value selected in the range of from 0 volume percent to 80 volume percent.

(c2) setting and regulating the oxygen content of said stream of gas to a value selected from the range of from 10 volume percent to 30 volume percent.

3. A method of making halogen lamp bulbs, discharge lamp bulbs, arc discharge lamp bulbs, neon lights, glass electrodes, analytical process glass, reagent container glass, glass test tubes, burets, pipettes, titration cylinders, glass reagent bottles, tubular glass parts in duct work, chemical equipment construction glass, flow meter glass, biotechnological process glass, display component glass, medical glass containers, ampules, bottles, injection bottles, cylinder ampules, or pharmaceutical product primary packaging glass, with a predetermined interior glass surface quality and purity, by hot forming, said method comprising the steps of:

(a3) producing a melt of molten glass;

(b3) passing molten glass along a tool to form a glass body from said melt of molten glass;

(c3) regulating a stream of gas to provide a sufficient stream of gas having a sufficient oxygen content in the interior of said glass body to minimize sodium ions and/or alkali oxides in said glass body and to minimize contamination of said glass

body and thus to produce a glass surface of predetermined quality and predetermined purity in the interior of said glass body; and

(d3) forming the final product to predetermined shape.

4. The method of Claim 3 wherein said stream of gas contains at least an additional gas, in addition to oxygen, said additional gas including at least one member of the group comprising: nitrogen, inert gases, carbon dioxide (CO_2), sulfur dioxide (SO_2), and steam (H_2O); and said stream of gas being supplied with a predetermined concentration of the selected gas.

5. In a process of making halogen lamp bulbs, discharge lamp bulbs, arc discharge lamp bulbs, neon lights, glass electrodes, analytical process glass, reagent container glass, glass test tubes, burets, pipettes, titration cylinders, glass reagent bottles, tubular glass parts in duct work, chemical equipment construction glass, flow meter glass, biotechnological process glass, display component glass, medical glass containers, ampules, bottles, injection bottles, cylinder ampules, or pharmaceutical product primary packaging glass, with a predetermined interior glass surface quality and purity, by hot forming, a method of making glass comprising the steps of:

(a5) producing a melt of molten glass;

(b5) passing molten glass along a tool to form a glass body from said melt of molten glass; and

(c5) regulating a stream of gas to provide a sufficient stream of gas having a sufficient oxygen content along said glass

body to minimize contamination of said glass body and thus to produce a glass surface of predetermined quality and predetermined purity.

6. The method of Claim 5 wherein said regulating step (c5) is continued for a period of time sufficient to set and modify the surface condition of said glass body to a surface depth of one of: approximately 2000 nanometers, and approximately 1000 nanometers.

7. The method of Claim 5 wherein hot forming according to step (b5) comprises drawing said glass body from said melt of glass.

8. The method of Claim 7 wherein glass is drawn in tubular form from said melt of glass.

9. The method of Claim 8 which comprises:

(a9) exposing, during drawing of glass in tubular form, the inner surface of glass in tubular form to said stream of gas.

10. The method of Claim 5 wherein glass is drawn in flat form from said melt of glass.

11. The method of Claim 5 comprising at least one of:

(a11) maintaining said melt of molten glass at a viscosity with a value selected in the range of from 10^4 dPas (10,000 decipascals) to 10^5 dPas (100,000 decipascals); and

(b11) said glass body is hot formed from a melt maintained at a temperature of more than 1000 degrees Celsius, in particular

from a hot glass melt at a temperature of more than 1200 degrees Celsius.

12. The method of Claim 11 comprising producing a melt of glass according to step (a5) from at least one member of the group comprising: borosilicate glass, neutral glass, and aluminosilicate glass.

13. The method of claim 12 wherein said glass object is hot formed from a melt of glass having the following material composition, which materials are in ranges in weight percent on an oxide basis: silicon dioxide (SiO_2) from 40% to 75%; alumina (Al_2O_3) from 10% to 27%; boric oxide (B_2O_3) from 0% to 15%; magnesium oxide (MgO) from 0% to 10%; calcium oxide (CaO) from 0% to 12%; strontium oxide (SrO) from 0% to 12%; barium oxide (BaO) from 0% to 30%; zinc oxide (ZnO) from 0% to 10%; zirconium oxide (ZrO_2) from 0% to 5%; lithia (lithium oxide (Li_2O) + sodium oxide (Na_2O) + potassium oxide (K_2O)) from 0% to 7%; titania (titanium dioxide - TiO_2) from 0% to 5.5%; phosphorous oxide (P_2O_5) from 0% to 9.0%; and optional fining agents and coloring components in conventional quantities.

14. The method of Claim 13 wherein said glass object is hot formed from a glass melt having the following material composition, which materials are in ranges in weight percent on an oxide basis: silicon dioxide (SiO_2) from 60% to 80%; alumina (Al_2O_3) from 2% to 10%; boric oxide (B_2O_3) from 5% to 20%; magnesium oxide (MgO) from 0% to 8%; calcium oxide (CaO) from 0%

to 12%; strontium oxide (SrO) from 0% to 8%; barium oxide (BaO) from 0% to 12%; zinc oxide (ZnO) from 0% to 10%; zirconium oxide (ZrO_2) from 0% to 5%; lithia (lithium oxide (Li_2O) + sodium oxide (Na_2O) + potassium oxide (K_2O)) from 2% to 12%; and optional fining agents and coloring components in conventional quantities.

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15. An apparatus for hot forming of a body of glass from a glass melt which body of glass is used such as in halogen lamp bulbs, discharge lamp bulbs, arc discharge lamp bulbs, neon lights, glass electrodes, analytical process glass, reagent container glass, glass test tubes, burets, pipettes, titration cylinders, glass reagent bottles, tubular glass parts in duct work, chemical equipment construction glass, flow meter glass, biotechnological process glass, display component glass, medical glass containers, ampules, bottles, injection bottles, cylinder ampules, or pharmaceutical product primary packaging glass, said body of glass being configured with a predetermined interior glass surface quality and purity, said apparatus comprising:

a vessel configured to form and maintain a melt of glass;

apparatus configured to withdraw a predetermined volume of molten glass from said vessel;

said apparatus configured to withdraw a predetermined volume of molten glass comprising apparatus to shape said body of glass by hot forming said body of glass from said predetermined volume of molten glass;

apparatus configured to produce a stream of gas comprising apparatus configured to contact a surface of said body of glass at least in part with said stream of gas; and

apparatus configured to define and regulate a predetermined oxygen content in said stream of gas.

16. The apparatus as claimed in Claim 15 comprising at least one of:

(a16) said apparatus configured to shape said body of glass by hot forming and said apparatus configured to contact a surface of said body of glass being comprised of a material capable to withstand one of: a temperature of more than 1000 degrees Celsius, and a temperature of more than 1200 degrees Celsius; and

(b16) at least one of said apparatus configured to shape said body of glass by hot forming and said apparatus configured to contact a surface of said body of glass being comprised of at least one of (i), (ii), or (iii), as follows:

(i) material coated at least in part with at least one of platinum and an alloy containing platinum;

(ii) platinum; and

(iii) an alloy containing platinum.

17. The apparatus for hot forming according to Claim 15 which comprises a drawing plant for drawing a melt of molten glass.

18. The drawing plant of Claim 17 which comprises at least one of:

(a18) a tube drawing plant, and

(b18) a flat glass drawing plant.

19. Use of said body of glass produced by the hot forming method according to Claim 5 which comprises at least one of:

(a19) production of light bulbs,

(b19) production of heavy-duty halogen light bulbs,

(c19) production of containers, and

(d19) production of pharmaceutical products primary packaging.

20. The apparatus of Claim 15 which comprises:

apparatus configured to guide said stream of gas at least partly along at least one surface of said body of glass.